

Future Dairy Farm Systems Project – NARF (Dargaville)

This project compares the productivity, profitability and impact on people and the environment on three farms, being:

1. **Current Farm** – Kikuyu & ryegrass based pastures with up to 190 kg N/ha/annum, 3.1 cows/ha
2. **Alternative Pastures Farm** – Fescue & cocksfoot based pastures, up to 190 kg N/ha, 3.1 cows/ha
3. **Low Emissions Farm** – Kikuyu & ryegrass based pastures, designed to reduce methane emissions by 25% and nitrous oxide by 50%, no nitrogen applied, 2.3 cows/ha

This project is funded by DairyNZ, MPI (Sustainable Food & Fibre Futures) and Hine Rangī Trust.

Update – 1 st June 2023	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (kg DM/ha, excl silage pad)	2169	2202	2169
Pasture Growth (kg DM/ha/d, last 2 weeks)	41	36	38
Rotation Length (days)	62	59	71
Cows in Milk/Peak Cows	0/84	0/85	0/63
Estimated Production/cow – 2022/23 (kg MS)	393	406	399
Estimated Production/ha – 2022/23 (kg MS)	1204	1269	910
Supplement Fed (kg DM/cow/day)	2.1 PKE 3.3 Baleage	0	0
Purchased Supplement Fed (kg DM/cow 2023-24 season)	0	0	0
Homegrown Silage Fed (kg DM/cow 2023/24 season)	0	0	0
Homegrown Silage on hand (kg DM/cow)	0	83	580
Average Body Condition Score (Milkers)	4.6	4.7	4.6
Worry Score (1 = Low, 10 = High)	4	3	2
Nitrogen – 2022/23 Season (kg N/ha)	171	177	0
Rainfall (mm last 2 weeks)	41 mm		

CURRENT MANAGEMENT

- We have been running a 60 day rotation on all three farms over the last 2 weeks, which has helped lift pasture cover. We will now move to a 70 day rotation to further lift cover. We are targeting an average pasture cover of 2400 kg DM/ha by the 1st July.
- Cows on all farms have picked up condition and are on track to be 5.0+ by calving. Heifers are in with the cows now and have an average condition score of 5.5.
- We are targeting to feed 12 kg DM/cow/day on all farms for the next fortnight. Cows on the two higher stocked farms will be receiving around 7 kg DM pasture and 5 kg DM supplement, baleage when ground conditions are dry enough or PKE on the pad when wet. Cows on the Low Emissions Farm will be receiving around 10 kg DM pasture and 2 kg DM baleage.
- In the last 2 weeks we have applied nitrogen to the bottom half of the feed wedge on the Current and Alternative Pastures Farms to get the ryegrass up and running, now the kikuyu has slowed down. We will continue with 60 kg Sustain/ha behind the cows.